Midrange gain and represents the maximum gain of the amplifier in its frequency working range.

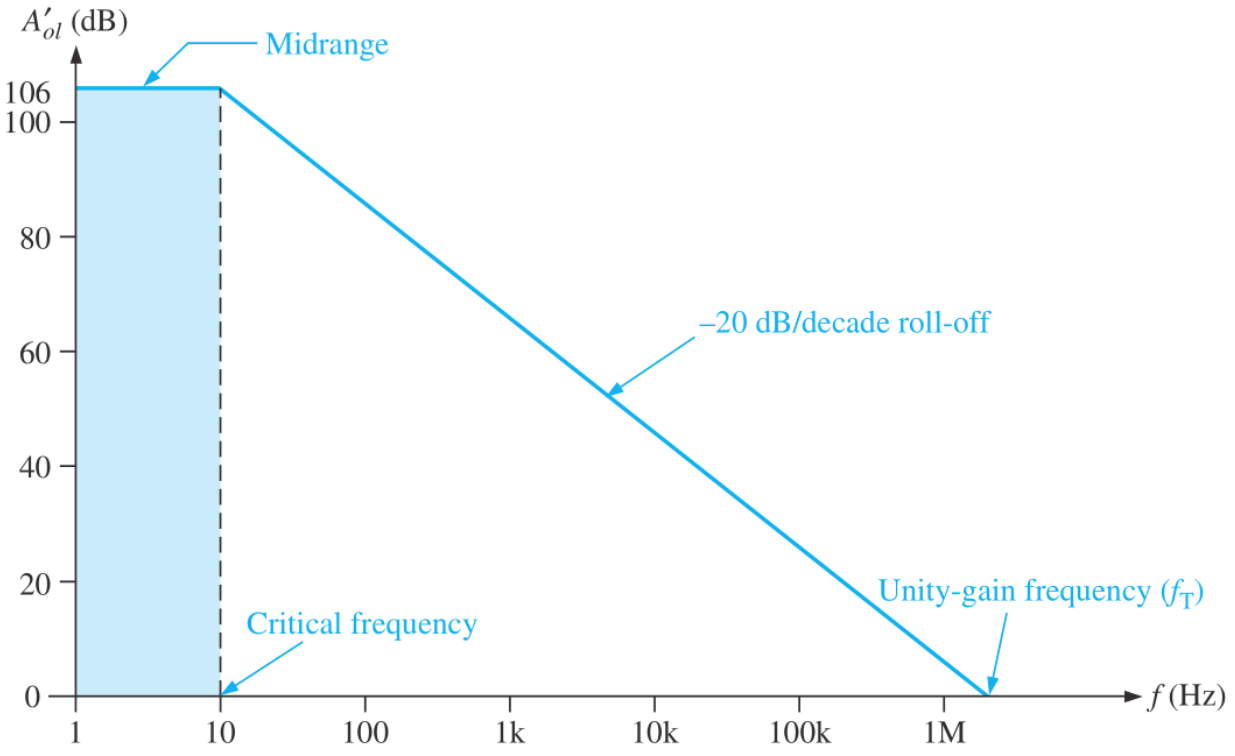

FIGURE 7–2 **Ideal plot of open-loop voltage gain versus frequency for a typical op-amp. The frequency scale is logarithmic.**

Bandwidth

Bandwidth of an AC amplifier is the frequency range b/w points where gain 3db lesser than midrange gain.

$Bandwidth = f_{cu} - f_{cl}$

The gain is frequency dependent.

Op-amps open look gain extends to zero frequency(DC) since there is no coupling capacitor in between the stages.

Generally, $bandwidth = f_{cu} - f_{cl}$, Since Op-amp's lower cutoff frequency extends to **zero**(DC), bandwidth is just upper critical frequency $bandwidth = f_{cu}$